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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,256	04/09/2001	Jeffrey Dinkel	DINK1	7582
6980	7590	11/02/2004	EXAMINER	
TROUTMAN SANDERS LLP BANK OF AMERICA PLAZA, SUITE 5200 600 PEACHTREE STREET, NE ATLANTA, GA 30308-2216			A, PHI DIEU TRAN	
			ART UNIT	PAPER NUMBER
			3637	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,256

Applicant(s)

DINKEL, JEFFREY

Examiner

Phi D A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 20-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 36-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. PRODUCT BY PROCESS CLAIM:

“ The subject matter present is regarded as a product by process claim in which a product is introduced by the method in which it is made. It is the general practice of this office to examine the final product described regardless of the method provided by the applicant.”

The above office policy applies to the limitation “ non-liquid applied”.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 8-9, 13-16, 18, 36, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (01/0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated construction element having a core (10) having an upper principal surface and a lower principal surface, alkaline resistance fiber to be used with a Portland cement, having additive of expanded shale (col 10 line 3 third paragraph), a pervious upper reinforcement material on the upper principal surface of the core, a cement slurry binding the reinforcement layer on the upper surface of the core, an upper coating/cement slurry in communication with the upper principal surface of the core and the pervious upper reinforcement material, the layer comprising a fiberglass mesh with an alkaline resistant coating selected from the group consisting of woven fiberglass and fiberglass skim.

Mathieu does not show the core having alkaline resistance fiber, and an impervious membrane remaining on the lower principle surface of the core after the manufacture of the

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element, and the membrane being high tensile strength, the membrane being a polymer membrane, the membrane being a single polymer membrane layer.

Fahmy (col 2 lines 53-58) discloses an impervious polymer membrane (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water vapor barrier, the membrane (22) being a single polymer membrane layer.

Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show the core having alkaline resistance fiber, and an impervious membrane on the lower principle surface of the core after the manufacture of the element because fiber would reinforce and strengthen the core as taught by Dinkel, and having an impervious membrane on the lower principle surface of the core after the manufacture of the element, the membrane being a single polymer membrane layer would provide a water barrier to the construction element while allowing water vapor to escape as taught by Fahmy

2. Claims 2, 7, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations including only one impervious membrane for the construction element located on the lower principal surface of the core except for the fiber being chopped reinforcement fibers randomly dispersed in the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the fiber being chopped reinforcement fibers randomly dispersed in the core because using chopped fibers randomly distributed on a

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core to reinforce a core is well-known in the art as it provides high strength to the core while maintaining low distribution cost.

3. Claims 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified by Dinkel shows all the claimed limitations except for the membrane being a spunbonded olefin, alkaline resistant dense polymer fiber mat, Tyvek, or the membrane having waterproof paperboard.

Fahmy discloses the membrane being conventionally known "breathable" resins made from polyesters, polyurethanes, acrylic polymers, polyethers, ester-ether copolymers, and the like as well as blends and copolymer thereof.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the membrane being a reinforced polymer membrane, spunbonded olefin, alkaline resistant dense polymer fiber mat, Tyvek, or the membrane having waterproof paperboard because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

4. Claims 4-6, 10-12, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations except for the membrane being a spunbonded olefin, alkaline resistant dense polymer fiber mat, or the membrane having waterproof paperboard.

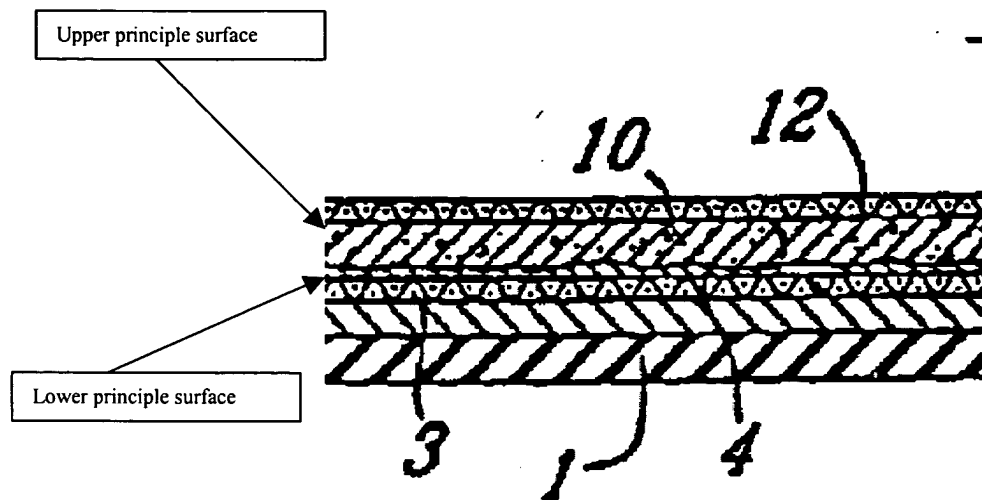
Fahmy discloses the membrane being conventionally known “breathable” resins made from polyesters, polyurethanes, acrylic polymers, polyethers, ester-ether copolymers, and the like as well as blends and copolymer thereof.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu’s modified structure to show the membrane being a reinforced polymer membrane, spunbonded olefin, alkaline resistant dense polymer fiber mat, or the membrane having waterproof paperboard because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

5. Claims 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated asymmetrical construction element (see below) having a core (10) having an upper principal surface and a lower principal surface, the element being asymmetrical in design such that a layer or layers on the upper principle surface differ in arrangement from the layer or layers on the lower principle surface (inherently so as the lower surface include the slurry cement layer), the upper principle and the lower principle surface of the core having different moisture-resistant layers respectively (inherently per the slurry cement layer), the different moisture resistant layers having different moisture resistant properties.

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Mathieu does not show a single impervious membrane layer remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength.

Fahmy (col 2 lines 53-58) discloses a single impervious polymer membrane layer (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water barrier.

Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show a single impervious membrane layer remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength because having a single impervious membrane layer on the lower principle surface of the core after the manufacture of the element would provide a water barrier to the construction element while allowing water vapor to escape as taught by Fahmy.

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6. Claims 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu (figure 9) discloses a prefabricated asymmetrical cementitious panel(see figure 9 above) having a core (10) having an upper principal surface and a lower principal surface, a pervious upper reinforcement material (12) on the upper principal surface of the core, an upper coating/cement slurry in communication with the upper principal surface of the core, the panel being asymmetrical in design such that a layer or layers on the upper principle surface differ in arrangement from the layer or layers on the lower principle surface (inherently so as the lower surface include the slurry cement layer), alkaline resistance fiber to be used with a Portland cement.

Mathieu does not show an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength.

Fahmy (col 2 lines 53-58) discloses a impervious polymer membrane (22) remaining on the lower principle surface of the core (20) after the manufacture of the element to act as a water barrier.

Dinkel discloses fiber in the core to reinforce the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu to show the core having fibre, an impervious membrane remaining on the lower principle surface of the core after the manufacture of the element, and the membrane being high tensile strength because fiber would reinforce and strength the core as taught by Dinkel, having an impervious membrane on the lower principle surface of the core

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after the manufacture of the element would provide a water barrier to the construction element while allowing water vapor to escape as taught by Fahmy.

7. Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathieu (0000738) in view of Fahmy (6171680) and Dinkel(3284980).

Mathieu as modified shows all the claimed limitations except for the fiber being chopped reinforcement fibers randomly dispersed in the core.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mathieu's modified structure to show the fiber being chopped reinforcement fibers randomly dispersed in the core because using chopped fibers randomly distributed on a core to reinforce a core is well-known in the art as it provides high strength to the core while maintaining low distribution cost.

Response to Arguments

8. Applicant's arguments filed 7/20/04 have been fully considered but they are not persuasive.

With respect to applicant's statements to the prosecution process and history, examiner respectfully points out that the claims have been properly prosecuted. As applicant is well aware, the fact that prosecution may be lengthy does not mean the prosecution process is improper.

With respect to applicant's argument that Mathieu does not show an impervious membrane on the construction element itself, examiner agrees. This fact is illustrated in the

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office action above. The combination of Mathieu with Fahmy, however, teaches the limitation to “impervious membrane”. The argument is thus moot.

With respect to applicant’s statements to Fahmy, examiner respectfully points out that the resin/membrane layer (22) prevents water from going through while allowing water vapor to seep through. The combination of Mathieu and Fahmy thus allows Mathieu’s construction element to be water impermeable while allowing water vapor to seep through. Mathieu (col 13 lines 18-19) discloses the construction element being exterior insulation or finish system. The sheathing of Fahmy is an exterior insulation or finish system. The teaching of Fahmy improves Mathieu’s exterior insulation as it makes the element water impermeable, while allowing water vapor to seep through. The argument is thus moot.

With respect to applicant’s statement that the office action digresses from the subject matter to common construction elements, examiner respectfully points out the boards/insulation taught by Mathieu, the sheathing taught by Fahmy, and the panel taught by Dinkel, are all common construction elements. The argument is thus moot.

In response to applicant’s argument that Fahmy is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Fahmy teaches an improvement on a sheathing element which is an exterior insulation, and Mathieu teaches the panel being exterior insulation/finish system. The teachings of the reference are thus analogous, as they are in the same field, and in the field of applicant’s endeavor. Applicant in the Remarks page 9 explicitly

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states that Mathieu embodies “ the very essence of the prior art that the present application attempts to improve upon” which puts Mathieu’s teachings in the field of applicant’s endeavor.

The argument is thus moot.

With respect to applicant’s statements that Fahmy cannot be altered to include the cement core and reinforcement layers of Dinkel and Mathieu, examiner respectfully points out that the rejection above is based on the reference Mathieu being the primary reference, not Fahmy. The combination is to modify the teachings of Mathieu. The argument is thus moot.

With respect to applicants’ statement to Fahmy’s membrane being liquid applied, examiner would like to refer applicant to the above Product by Process office policy to respect the limitation. The argument is thus moot.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 703-306-9136. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phi Dieu Tran A *PA*

10/22/04

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